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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/836,204	04/18/2001	Seong Cheol Shin	YHK-065	6497

34610 7590 03/04/2003

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CHANTILLY, VA 20151

EXAMINER

LAO, LUN YI

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 03/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/836,204

Applicant(s)
Shin

Examiner
Lun-yi Lao

Art Unit
2673



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed on 5/9/2002 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56© most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art in view of Kim et al(6,229,516).

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As to claims 1-12, Applicant's admitted prior art teaches a method for driving a plasma display comprising the steps of: applying an upper driving signal to address electrode lines(X11-X1n) provided at the upper block and applying a lower driving signal to address electrode lines(X22-X2n) provided at the lower block(simultaneous with the upper driving signal(see figures 2, 4; page 2, lines 23-33; page 3; page 4, lines 1-28; pages 5-6 and page 7, lines 1-19).

Applicant's admitted prior art fail to drive a plasma display panel utilizing an asymmetry sustaining.

Kim et al teach a asymmetry driving method for driving a flat panel display(see figures 2, 9 and column 8, lines 6-19). It would have been obvious to have modified applicant's admitted prior art with the teaching of Kim, since Kim has disclosed a plasma display is a flat panel display and the flat panel display could be either using a symmetry driving method(see figure 8) or an asymmetry driving method(see figure 9)(see figures 2, 8-9; column 1, lines 10-15; column 7, lines 22-68 and column 8, lines 1-19) and applicant's admitted prior art has disclosed the upper scanning driver(32a) and the lower scanning driver(32b) could be independently operated by themselves and the upper data driver(34a) and the lower data driver(34b) could be independently operated by themselves(see figure 2).

As to claims 8-10, applicant's admitted prior art teach a driving apparatus having a controller(39) for controlling the energy recovery circuit(36A, 36B) and Kim et al teaches first and second signal for controlling first and second address drivers(12, 14) having different phase(delay)(see figures 2 and 9).

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As to claims 2 and 11, Kim et al teach the lower driving signal(down A) is applied at halftime of an application period of the upper driving signal(see figure 9).

As to claims 3-6, Kim et al teach when the upper driving signal(up A) falls into ground level, the lower driving signal(down A) remains at a stable voltage level; when the lower driving signal(down A) falls into ground level, the upper driving signal(up A) remains at a stable voltage level (see figure 9).

As to claim 7, applicant's admitted prior art teaches a method for driving an energy recovery circuit(36A, 36B) at the application time of the driving signals to raise the driving signals into a stable voltage level and driving the energy recovery circuit after the data was supplied to the corresponding block, thereby falling driving signals into a ground voltage level(see figure 4; page 6, lines 10-33 and page 7 lines 1-19).

As to claim 12, applicant's admitted prior art teaches a first scanning/sustaining driver(32A); a second scanning/sustaining driver(32B) and a common sustaining driver(34)(see figure 2).

4. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokunaga et al(5,995,069) in view of Kim et al(6,229,516).

Tokunaga et al teach a method for driving a plasma display comprising the steps of: applying an upper driving signal(D1-D12) to address electrode lines provided at the upper block and applying a lower driving signal(D--D12) to address electrode lines provided at the lower

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block to overlap with the upper driving signal(simultaneous with the lower driving signal(see figures 9, 11; column 9, lines 58-68 and column 10, lines 1-12).

Tokunaga et al fail to drive a plasma display panel utilizing an asymmetry sustaining.

Kim et al teach a asymmetry driving method for driving a flat panel display(see figures 2, 9 and column 8, lines 6-19). It would have been obvious to have modified Tokunaga et al with the teaching of Kim, since Kim has disclosed a plasma display is a flat panel display and the flat panel display could be either using a symmetry driving method(see figure 8) or an asymmetry driving method(see figure 9)(see figures 2, 8-9; column 1, lines 10-15; column 7, lines 22-68 and column 8, lines 1-19) and Tokunaga et al have disclosed the upper scanning driver(32a) and the lower scanning driver(32b) could be independently operated by themselves(see figure 10) and the upper data driver(34a) and the lower data driver(34b) could be independently operated by themselves(see figure 11).

As to claims 8-11, Kim et al teach a driving apparatus having a controller(100) for controlling the energy recovery circuit(12, 14) and Kim et al teaches first and second signal for controlling first and second address drivers(12, 14) having different phase(delay)(see figures 2 and 9).

As to claims 2 and 11, Kim et al teach the lower driving signal(down A) is applied at halftime of an application period of the upper driving signal(see figure 9).

As to claims 3-6, Kim et al teach when the upper driving signal(up A) falls into ground level, the lower driving signal(down A) remains at a stable voltage level; when the lower driving

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signal(down A) falls into ground level, the upper driving signal(up A) remains at a stable voltage level (see figure 9).

As to claim 12, Tokunaga et al teach a first scanning/sustaining driver(32A); a second scanning/sustaining driver(32B) and a common sustaining driver(33)(see figure 10).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Suzuki et al(6,262,699) teaches a plasma display panel having a first scanning/sustaining driver(40A); a second scanning/sustaining driver(40B) and a common sustaining driver(30)(see figure 1)

Kawamura et al(6,243,073) teaches a plasma display having a first anode driving circuit(6) and a second anode driving circuit(8)(see figure 1).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lun-yi, Lao whose telephone number is (703) 305-4873.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala, can be reached at (703) 305-4938.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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Washington, D.C. 20231

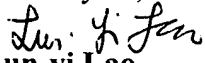
or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

February 27, 2003


Lun-yi Lao
Primary Examiner